

15555

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(iii) NUMBER OF SEQUENCES: 21

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(A) APPLICATION NUMBER:
(B) FILING DATE:
(C) CLASSIFICATION:

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(A) TELEPHONE: 732/594-3905
(B) TELEFAX: 732/594-4720

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

5 CGAGCAGCTG AACCGGGCCC TGATGAAAGT CCAGATGTTA CGGGNATCAC CGTTTTGAAC 60
 AAGACAAGAA GGCCACTGGT AGCTAACGTN TCCGAAACCA GTTAAGATTG GAAGAAAACG 120
 GTCCATCCAC GNACACATGG ACACAGACCC ACACATNTT 159

10 (2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- 15 (A) LENGTH: 484 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

25 TTTTTTTTGT TCTTACTCCC ACACCTAAGG TGGAANTTCT TTTATTGAGT CATAATAATT 60
 TCCCGAGAAT TCCGAGTCCT GCTACTTTAG GTTCTTGCCC AGGAATCCAC CTCTTTTCCC 120
 CCAAGCCCCA CAATCCTTTG AGGTACTCAT GATTGAGCGC GTGGTGGGGG GGGGTGGGGA 180
 30 AGAGGCTGCA TGGGGGTGGG GCTCCTGTGG CTTACGTCA TCCACTGTCA CCTCTGGTCC 240
 CCAAGTCTCT GGATCCTTTG GTCTCACCTC TAGACAACCG GCGGGGTTC AACTTCTTC 300
 35 CCTGGCAACT CCTCTCTGTC CCGACAAAAT CTCTCCCAAG GCATTGTCCT TGTAGTTAGA 360
 TTTACACAGA GCTTTTGCTT TTATAAAGTG CGTTCATGCC CAGCTTCTCA CTTGCATGTC 420
 ATAGCACCCC TGGTGAGGTG GACAGGGAAG GGATGGCTCC CTCCATTTTG TAGGAAAGTN 480
 40 GGGG 484

(2) INFORMATION FOR SEQ ID NO:5:

- 45 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 24 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 50 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid

- (A) DESCRIPTION: /desc = "oligonucleotide"

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0001-011995

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

AAGCTGCTGG ACTACCACCT GCTC

24

5 (2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 22 base pairs

(B) TYPE: nucleic acid

10 (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid

15 (A) DESCRIPTION: /desc = "oligonucleotide"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

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TACTGCCCTG GAGGTGAGTT CA

22

(2) INFORMATION FOR SEQ ID NO:7:

25 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

30 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid

(A) DESCRIPTION: /desc = "oligonucleotide"

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

40 CCAAGCCCAA CAATCCTTTG A

21

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

45 (A) LENGTH: 21 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: other nucleic acid

50 (A) DESCRIPTION: /desc = "oligonucleotide"

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

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CCAGTGCCAA GCCAGAAGCA GCAGAGACAA CAGTGAATGA CAAGGAGGGG CCATCCAATC 180
 CCTGCTGCCA CCTCCTGGGA TGGAGCCCTA GGGAGCCCCT GTGCTGCCCC TGCCGTGGCA 240
 GGACTCACAG CCCCACCGCT GCACTGAAGC CCAGGGCTGT GGAGCAGCTC TCTCCTTGGA 300
 CTCCTCTCGG CCCTAAAGGG ACTGGGCAGA GCCTTCCAGG ACTATGGTTG GACTGAAGCC 360
 TTCAGACGTG CCTCCCACCA TGGCTGTGAA GTTCCTGGGG GCAGGCACAG CAGCCTGTTT 420
 TGCTGACCTC GTTACCTTTC CACTGGACAC AGCCAAGGTC CGCCTGCAGA TCCAGGGGGA 480
 GAACCAGGCG GTCCAGACGG CCCGGCTCGT GCAGTACCGT GCGGTGCTGG GCACCATCCT 540
 GACCATGGTG CGGACTGAGG GTCCCTGCAG CCCCTACAAT GGGCTGGTGG CCGGCCGTGA 600
 GCGCCAGATG AGCTTCGCCT CCATCCGCAT CGGCCTTTAC GACTCCGTCA AGCAGGTGTA 660
 CACCCCCAAA GGC GCGGACA ACTCCAGCCT CACTACCCGG ATTTTGGCCG GCTGCACCAC 720
 AGGAGCCATG GCGGTGACCT GTGCCCAGCC CACAGATGTG GTGAAGGTCC GATTTTCAGGC 780
 CAGCATACAC CTCGGGCCAT CCAGGAGCGA CAGAAAATAC AGCGGGACTA TGGACGCCA 840
 CAGAACCATC GCCAGGGAGG AAGGAGTCAG GGGCCTGTGG AAAGGAACTT TGCCCAACAT 900
 CATGAGGAAT GCTATCGTCA ACTGTGCTGA GGTGGTGACC TACGACATCC TCAAGGAGAA 960
 GCTGCTGGAC TATCACCTGC TCACTGACAA CTTCCCCCTGC CACTTTGTCT CTGCCTTTGG 1020
 AGCCGGCTTC TGTGCCACAG TGGTGGCCTC CCCGGTGGAC GTGGTGAAGA CCCGGTATAT 1080
 GAACTCACCT CCAGGCCAGT ACTTCAGCCC CCTCGACTGT ATGATAAAGA TGGTGGCCCA 1140
 GGAGGGCCCC ACAGCCTTCT ACAAGGGATT TACACCCTCC TTTTTCGGTT TGGGATCCTG 1200
 GAACGTGGTG ATGTTCTGTA CCTATGAGCA GCTGAAACGG GCCCTGATGA AAGTCCAGAT 1260
 GTTACGGGAA TCACCGTTTT GAACAAGACA AGAAGGCCAC TGGTAGCTAA CGTGTCGGAA 1320
 ACCAGTTAAG AATGGAAGAA AACGGTGCAT CCACGCACAC ATGGACACAG ACCCACACAT 1380
 GTTTACAGAA CTGTTGTTTA CTTGTTGCTG ATTCAAGAAA CAGAAGTAGA AGAGAGAGGA 1440
 TTCTGGTCTT CACTGCCATG CCTCAAGAAC ACCTTTGTTT TGCCTGACA AGATGGAAAA 1500
 TAAATTATAT TAATTTTTGA AACCCATTAG GCATGCCTAA TATTTAGGCA AGAGAAAATA 1560
 AACCAAGATA GATCCATTTG GACAAAATGG AAGGTGGAG ACGTGTATCC CCGTGAAATC 1620
 TGGTCAGATA ATGAATGATA AGCAGGAAGG ATGGCAAGCA CGGGACAGGA GGGGCCACAA 1680
 ATGGAGTGGG AGATCAGCCA CGGAGCCTGG AGGGACGCCA CCCAGCAACA CAGAGCTGGC 1740
 GACTGCAGCT GCACCATCAC ACATGCATCA TCAGCCTATT TGTAATATGT CTGCCACAGA 1800

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Gly Leu Tyr Asp Ser Val Lys Gln Val Tyr Thr Pro Lys Gly Ala Asp
100 105 110

40 (2) INFORMATION FOR SEQ ID NO:13:

(A) DESCRIPTION: /desc = "oligonucleotide"

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(2) INFORMATION FOR SEQ ID NO:14:

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- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 28 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

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- (ii) MOLECULE TYPE: other nucleic acid
 - (A) DESCRIPTION: /desc = "oligonucleotide"

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- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

CATTCCTCGAG CTACCAGTGG CCTTCTTG

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(2) INFORMATION FOR SEQ ID NO:15:

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- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 20 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

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- (ii) MOLECULE TYPE: other nucleic acid
 - (A) DESCRIPTION: /desc = "oligonucleotide"

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- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

CCCGGATCGG ACTACTAGCA

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(2) INFORMATION FOR SEQ ID NO:16:

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- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 21 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

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- (ii) MOLECULE TYPE: other nucleic acid
 - (A) DESCRIPTION: /desc = "oligonucleotide"

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- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

GGGGGGAGGG CGTGAATGTA A

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(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 1658 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: double

(D) TOPOLOGY: both

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

| | | | | | | | |
|----|------------|------------|------------|-------------|------------|------------|------|
| 15 | CCAGGAACAG | CAGAGACAAC | AGTGAATGGT | GAGGCCCCGGC | CGTCAGATCC | TGCTGCTACC | 60 |
| | TAATGGAGTG | GATCCTTAGG | GTGGCCCTGC | ACTACCCAAC | CTTGGCTAGA | CGCACAGCTT | 120 |
| | CCTCCCTGAA | CTGAAGCAAA | AGATTGCCAG | GCAAGCTCTC | TCCTCGGACC | TCCATAGGCA | 180 |
| 20 | GCAAAGGAAC | CAGGCCCATT | CCCCGGGACC | ATGGTTGGAC | TTCAGCCCTC | CGAAGTGCCT | 240 |
| | CCCACAACGG | TTGTGAAGTT | CCTGGGGGCC | GGCACTGCGG | CCTGTTTTGC | GGACCTCCTC | 300 |
| 25 | ACTTTTCCCC | TGGACACCGC | CAAGGTCCGT | CTGCAGATCC | AAGGGGAGAA | CCCAGGGGCT | 360 |
| | CAGAGCGTGC | AGTACCGCGG | TGTGCTGGGT | ACCATCCTGA | CTATGGTGCG | CACAGAGGGT | 420 |
| | CCCCGCAGCC | CCTACAGCGG | ACTGGTCGCT | GGCCTGCACC | GCCAGATGAG | TTTTGCCTCC | 480 |
| 30 | ATTCGAATTG | GCCTCTACGA | CTCTGTCAAG | CAGTTCTACA | CCCCCAAGGG | AGCGGACCAC | 540 |
| | TCCAGCGTCG | CCATCAGGAT | TCTGGCAGGC | TGCACGACAG | GAGCCATGGC | AGTGACCTGC | 600 |
| 35 | GCCCAGCCCA | CGGATGTGGT | GAAGGTCCGA | TTTCAAGCCA | TGATACGCCT | GGGAACTGGA | 660 |
| | GGAGAGAGGA | AATACAGAGG | GACTATGGAT | GCCTACAGAA | CCATCGCCAG | GGAGGAAGGA | 720 |
| | GTCAGGGGCC | TGTGGAAAGG | GACTTGGCCC | AACATCACAA | GAAATGCCAT | TGTCAACTGT | 780 |
| 40 | GCTGAGATGG | TGACCTACGA | CATCATCAAG | GAGAAGTTGC | TGGAGTCTCA | CCTGTTTACT | 840 |
| | GACAACTTCC | CCTGTCACTT | TGTCTCTGCC | TTTGAGCTG | GCTTCTGTGC | CACAGTGGTG | 900 |
| 45 | GCCTCCCCGG | TGGATGTGGT | AAAGACCCGA | TACATGAACG | CTCCCCTAGG | CAGGTACCGC | 960 |
| | AGCCCTCTGC | ACTGTATGCT | GAAGATGGTG | GCTCAGGAGG | GACCCACGGC | CTTCTACAAA | 1020 |
| | GGATTGTGTC | CCTCCTTTCT | GCGTCTGGGA | GCTTGGAACG | TGATGATGTT | TGTAACATAT | 1080 |
| 50 | GAGCAACTGA | AGAGGGCCTT | AATGAAAGTC | CAGGTA CTGC | GGGAATCTCC | GTTTTGAACA | 1140 |
| | AGGCAAGCAG | GCTGCCTGGA | ACAGAACAAA | GCGTCTCTGC | CCTGGGGACA | CAGGCCCACA | 1200 |
| 55 | CGGTCCAGAA | CCCTGCACTG | CTGCTGACAC | GAGAAACTGA | ACTAAAAGAG | GAGAGTTTTA | 1260 |

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15 (2) INFORMATION FOR SEQ ID NO:18:

(D) TOPOLOGY: linear

(A) DESCRIPTION: /desc = "oligonucleotide"

Met Val Gly Leu Gln Pro Ser Glu Val Pro Pro Thr Thr Val Val Lys
1 5 10 15

Phe Leu Gly Ala Gly Thr Ala Ala Cys Phe Ala Asp Leu Leu Thr Phe
20 25 30

Pro Leu Asp Thr Ala Lys Val Arg Leu Gln Ile Gln Gly Glu Asn Pro
35 40 45

Gly Ala Gln Ser Val Gln Tyr Arg Gly Val Leu Gly Thr Ile Leu Thr
50 55 60

Met Val Arg Thr Glu Gly Pro Arg Ser Pro Tyr Ser Gly Leu Val Ala
65 70 75 80

Gly Leu His Arg Gln Met Ser Phe Ala Ser Ile Arg Ile Gly Leu Tyr
85 90 95

Asp Ser Val Lys Gln Phe Tyr Thr Pro Lys Gly Ala Asp His Ser Ser
100 105 110

Val Ala Ile Arg Ile Leu Ala Gly Cys Thr Thr Gly Ala Met Ala Val
115 120 125

Thr Cys Ala Gln Pro Thr Asp Val Val Lys Val Arg Phe Gln Ala Met
130 135 140

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35      (2) INFORMATION FOR SEQ ID NO:19:
          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 17 base pairs
              (B) TYPE: nucleic acid
40              (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

          (ii) MOLECULE TYPE: other nucleic acid
              (A) DESCRIPTION: /desc = "degenerate oligonucleotide"
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50 CCNCTGGAYA CNGCYAA

55 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 17 base pairs

(B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

5 (ii) MOLECULE TYPE: other nucleic acid
 (A) DESCRIPTION: /desc = "degenerate oligonucleotide"

10 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

CAGCCACNG ANGTNGT

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15 (2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 17 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

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(ii) MOLECULE TYPE: other nucleic acid
 (A) DESCRIPTION: /desc = "degenerate oligonucleotide"

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

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TTCACCACRT CNACNGG

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